



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/088,322

06/11/2002

Paul Beard

537-1070

1544

7590

06/30/2004

Lee Mann Smith McWilliams Sweeney & Ohlson  
PO Box 2786  
Chicago, IL 60690-2786

EXAMINER

BROWN, KHALED

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant N .

10/088,322

Applicant(s)

BEARD, PAUL

AK

Examiner

Khaled Brown

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6-11-02</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 9,11 and 12 recites the limitation "the sensor head" in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

Claims 1-8,14 and 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Monchalin (US 4633715).

Re clms 1,3,7,15: Monchalin discloses an interferometer sensor comprising: a two-dimensional sensor head comprising a polymer film of substantially uniform thickness disposed over a substrate (Col 5 lines 23-31), an interrogation signal source (28), the interrogation signal extending across the area of the sensor head and being incident normally to the sensor head (Fig 2), the sensor head providing an optical output signal over the area of the sensor head in dependence on incident signals detected by the sensor (Col 5 lines 23-31); and an optical sensing device arranged to receive the optical output signal from the sensor head at a location remote from the sensor head (38).

Re clm 2: photodetector (Col 7 line 24)

Re clms 4,5,6: Mochalin discloses the claimed invention except for stating that a polymer film has a thickness greater than 5um. It would have been obvious to one

Art Unit: 2877

having ordinary skill in the art at the time the invention was made to make a polymer film thickness greater than 5um or between 30um – 60um or a modulus less than 15 Gpa because it increases accuracy, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Re clm 8: continuous wave (Col 7 lines 56-57)

Re clm 14: optical arrangement (34)

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Monchalin (US 4633715) in view of Rao et al (6699717).

Re clm 16: Monchalin discloses the claimed invention as noted above. However Monchalin does not disclose a method having the steps of comprising the step of, on a transparent substrate, forming a polymer sensing film by spin coating a liquid polymer on the substrate. Rao et al discloses the step of, on a transparent substrate, forming a polymer sensing film by spin coating a liquid polymer on the substrate because it improves sensitivity (Rao et al Col 2 lines 19-20). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform the claimed method disclosed by Rao et al because it would have improved sensitivity.

Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monchalin (US 4633715) in view of Shaw et al (US 5125138).

Re clm 17: Monchalin discloses the claimed invention as noted above. However Monchalin does not disclose a method having the steps of thermally evaporating a polymer onto the surface of a transparent substrate, condensing the polymer into a

Art Unit: 2877

liquid phase; and curing the liquid phase polymer using a radiation source thereby forming a solid polymer film on the substrate. Shaw et al discloses thermally evaporating a polymer onto the surface of a transparent substrate, condensing the polymer into a liquid phase; and curing the liquid phase polymer using a radiation source thereby forming a solid polymer film on the substrate because it is economical (Shaw et al Claim 9). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform the claimed method disclosed by Shaw et al because it would have been economical.

Re clm 19: electron beam (Shaw et al Col 6 line 14)

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Monchalin (US 4633715) in view of Shaw et al (US 5125138) as applied to claims 17 and 19 above, and further in view of Munshi (US 66640006).

Re clm 18: The combination system of Monchalin and Shaw et al discloses the claimed invention as noted above including electron beam radiation (Shaw et al Col 6 line 14). However the combination system of Monchalin and Shaw et al does not disclose the use of ultra-violet radiation. Munshi teaches that electron beam radiation can be replaced by ultra-violet radiation (Munshi Col 5 lines 8-10) because it increases efficiency. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform the claimed method disclosed by the combination system of Monchalin and Shaw et al because it would have increased efficiency.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hercher 5812266, Alais 4034332 and Kohji 4399387.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khaled Brown whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8:30am-5pm.

Note: a signed copy of the two sheets of the IDS filed 6-11-02 is attached.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KB  
June 26, 2004

Frank Font  
Supervisory Patent Examiner  
Art Unit 2877